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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------|---------------------|------------------|
| 09/856,474 | 07/31/2001 | Frank Lehmann | P21009 | 9863 |
| 157 | 7590 | 03/15/2005 | EXAMINER | |
| BAYER MATERIAL SCIENCE LLC | | | ROBERTSON, JEFFREY | |
| 100 BAYER ROAD | | | ART UNIT | PAPER NUMBER |
| PITTSBURGH, PA 15205 | | | 1712 | |

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|------------------------------|------------------------|---------------------|--|
| | 09/856,474 | LEHMANN ET AL. | |
| | Examiner | Art Unit | |
| | Jeffrey B. Robertson | 1712 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 31 July 2001.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 25-63 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 25-63 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0901.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 25-63 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For claims 25 and 41, the specification does not provide enablement for the (C1) and (C2) provisions set forth in these claims. There does not appear to be support for the exclusion of Lewis acid carboxylates as catalysts for only the specific instances of (A1) and (A2). In addition, the support for (C2) is not apparent from the specification.

It is also noted that the preliminary amendment was submitted after the filing date of the original application and is not referred to in the oath/declaration.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 25-30, 39-46, 50, 54, 55, and 59-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Grögler et al. (U.S. Patent No. 4,442,280).

For claims 25, 26, 28, and 39, Grögler teaches systems containing an addition compounds having uretdione groups and free isocyanate groups, a polyhydroxy compound, and a catalyst. See col. 6, lines 12-64. Here, Grögler discloses that additional traditional catalysts may be added in addition to lead or tin catalyst. For claims 29, 30, and 40, Grögler teaches that the polyhydroxyl compounds can be polyethers and have molecular weights between 1,000-10,000. See column 8, lines 13-50. In Example 11, Grögler teaches that the polyether polyols have OH numbers of 56. See col. 23, line 48. This satisfies applicant's condition (A1) where the bonding agent is free of carboxyl groups. Grögler teaches that the catalyst is selected from tin catalysts that are preferably tin-sulfur compounds and are free of carboxyl groups, such as di-(n-octyl)-tin(IV)-bis-thiomethyl, satisfying applicant's (C1) condition. See col. 14, lines 29-49. In column 18, lines 59-66, Grögler teaches that the polyol is fluid at the reaction temperature.

For claim 27, in column 7, lines 6-8, Grögler teaches the addition of auxiliary materials.

For claims 41, 44-46, and 55, in column 16, lines 50-68, Grögler teaches that the components are briefly heated to encourage uniform distribution, cooled and then later cured in the presence of a catalyst. For claim 42, Grögler teaches that the mass is stored in column 4, lines 46-49.

For claim 43, Grögler teaches that the cross-linking is done through heating to guarantee thorough hardening. See col. 19, lines 1-9.

For claim 50, in column 11, lines 47-60, Grögler teaches the addition of low molecular weight modifying compounds such as ethylene glycol, which is a liquid.

For claim 54, in column 18, lines 66-68, Grögler teaches that the composition is in the form of a melt.

For claims 59-63, Grögler teaches that the masses are coated on substrates. See col. 25-31.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 47, 49, 51, 52, and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grögler et al. (U.S. Patent No. 4,442,280) as applied to claims 41 and 43 above.

For claims 47, 49, 51, 52, and 56-58, Grögler teaches the limitations of claims 41 and 43 as set forth above. In column 16, lines 50-54, Grögler teaches that the homogenizing takes place in a brief period. Grögler does not specifically teach that this period is up to 30 minutes or the methods of temperature increase. However, these processes appear to be result effective variables, depending on the specific uretdione and polyol used. A result effective variable is determined according to the desired properties of the resulting composition and would be obvious to one of ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

9. U.S. Patent No. 5,756,634 is cited as an X reference on the international search report. However, this reference does not meet the conditions required by either (C1) or (C2) now present in claims 25 and 41. Specifically, the reference requires bismuth carboxylates as catalysts. The reference also does not teach the use of blocking agents for the carboxyl groups. Laas et al. (U.S. Patent No. 5,621,064) is also listed as

an X reference on the international search report. However, this reference teaches that the polyols used have carboxyl groups. There is no teaching or suggestion in the reference that the melts obtained meet applicant's requirements (A1) or (A3) in claims 25 and 41.

10. Quiring et al. (U.S. Patent No. 3,923,743), Disteldorf et al. (U.S. Patent No. 4,463,154), and Gras et al. (U.S. Patent No. 6,613,861) are cited for general interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (571) 272-1092. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JBR



Jeffrey B. Robertson
Primary Examiner
Art Unit 1712